

Title (en)
EFFECTIVE VOLUME FILLING WITH TEMPLATES

Title (de)
EFFEKTIVE VOLUMENAUFFÜLLUNG MIT SCHABLONEN

Title (fr)
REMPLISSAGE DE VOLUME EFFECTIF AVEC DES MODÈLES

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Application
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EP 2009067809 W 20091222

Abstract (en)
[origin: WO2011076271A1] The present invention relates to the field of radiation therapy. In particular, the invention relates to a method and a dose planning module for planning a treatment session of a patient by means of a radiation therapy system comprising a radiation therapy unit having a fixed radiation focus point. The method according to the invention comprises: obtaining a target volume of a region of a patient to be treated during a treatment of a patient in a radiation therapy unit, the target volume being modeled as a three-dimensional voxel representation; Selecting an isodose level for the planned treatment; determining shots to be delivered during the treatment, each shot being modelled by a spatial dose volume distribution of radiation represented by a three-dimensional voxel representation, the shape of the spatial distribution depending on the specific collimator setting and the selected isodose level; and selecting shots in a decreasing volume order for the dose planning comprising: d1) initiating a position search for a specific shot to find an accepted position within the target volume; d2) iteratively mapping different positions for the voxel representation of a current shot on the voxel representation of the target volume; d3) checking whether predetermined conditions for each specific position are satisfied; and d4) if the predetermined conditions are satisfied for a specific position, defining that position as an accepted position and continue with step d1) - d3) for a shot having the similar shape; or d5) if the predetermined conditions are not satisfied for any position within the target volume, continuing with step d1) - d4) for a subsequent shot in the decreasing volume order.

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